



Maximum Use with Minimum Cost for Public Health Content

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“We have to have incredibly fast communication and we have to have, most importantly, fast action.”

Julie L. Gerberding, M.D.

Director, CDC

*Address to the American Association for the
Advancement of Science*

21 February 2005



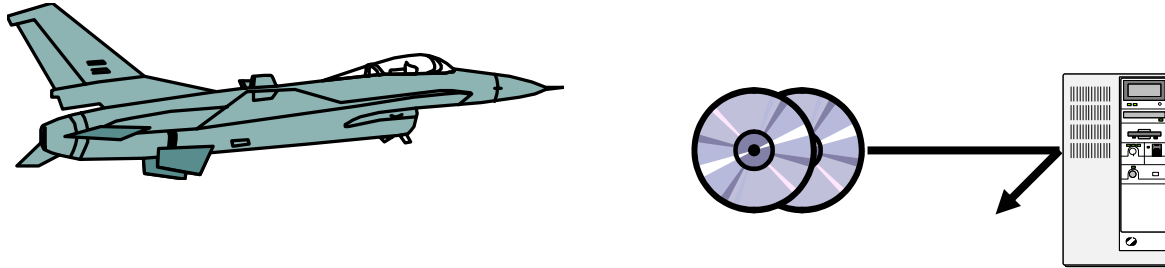
Some of the Challenges to Preparedness Training



- Diverse, dispersed workforce to prepare
- Limited funds
- Limited time
- Difficulty leveraging existing resources and work of peers

We cannot meet these challenges in isolation.

Challenges in Defense Training



- Content not portable / interoperable
- Content monolithic and not easily updated
- Content cannot be shared

Advanced Distributed Learning Initiative



- Highest-quality learning and performance aiding that can be tailored to individual needs and delivered cost-effectively, anytime and anywhere
- IT for structured learning
- Public-private collaborative
- Created SCORM to address interoperability problems with e-learning

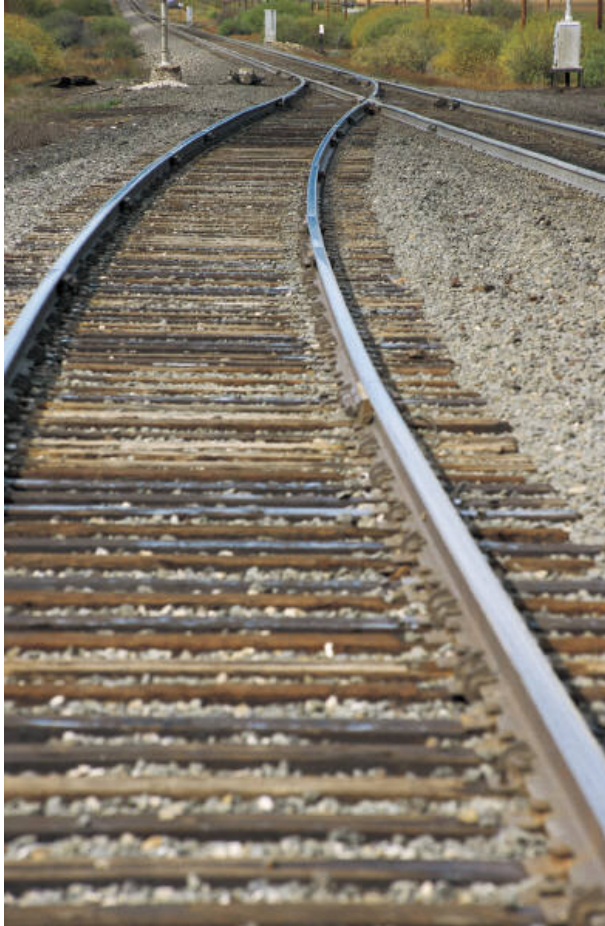
MedBiquitous Mission

To advance healthcare education through technology standards that promote professional competence, collaboration, and better patient care.

Non-profit, member-driven, standards development organization



ANSI Accredited Standards Developer



MedBiquitous develops information technology (XML) standards for:

- Healthcare education and training
- Healthcare professional competence assessment, certification, and licensure
- Healthcare professional and scientific publications
- Healthcare professional communities of practice

SCORM for Healthcare

Shareable
Content
Object
Reference
Model

- A suite of e-learning standards that enables **accessibility**, **reuse**, and **interoperability** of learning objects and **tracking** of learner progress.
- Standards for running, packaging, and describing learning content
- Broad international adoption
- Leverages healthcare specific extensions to SCORM metadata

Goals of SCORM

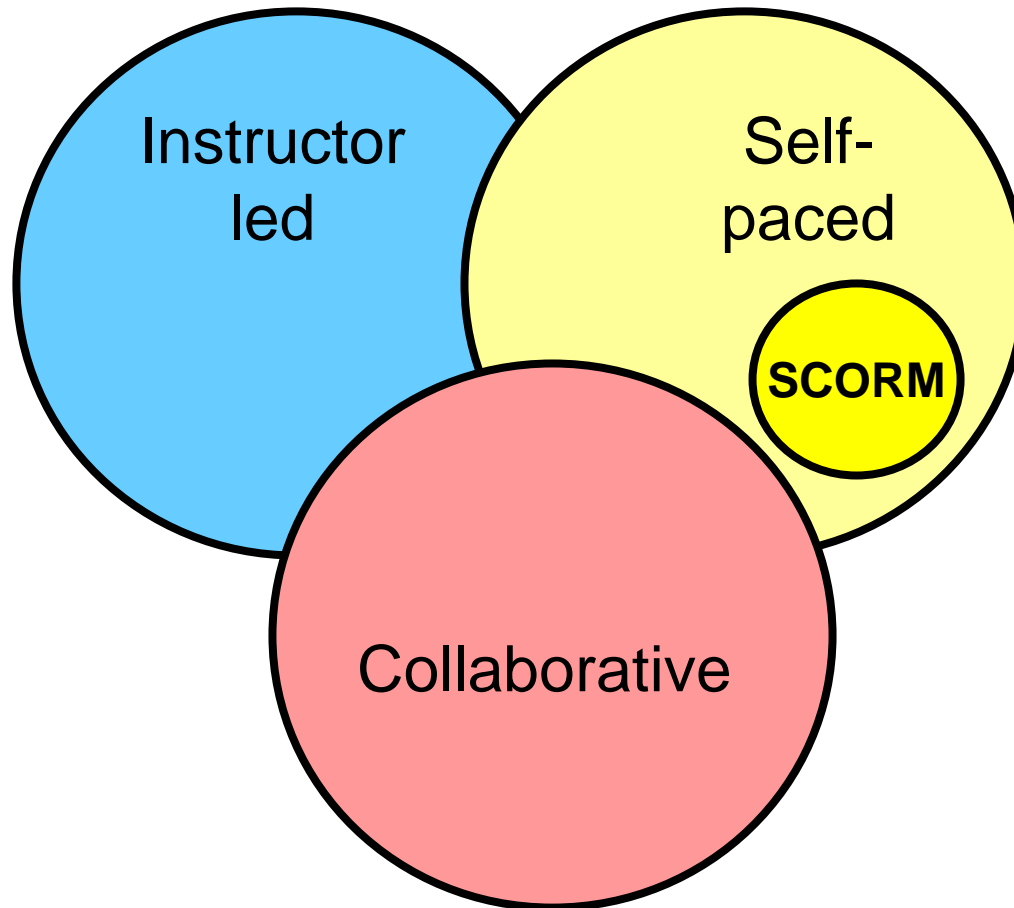
SCORM Content is...	Definition	Example
Accessible	Easily discovered and located.	Searching an education repository for hemorrhagic fever brings relevant results.
Reusable	Independent of learning context. Can be used for multiple situations.	Module on effects of radiation exposure can be included in multiple courses.
Interoperable	Can function in multiple hardware/software environments.	Module run in one LMS can be shared with other organizations and run on their systems.
Durable	Will continue to function as systems are upgraded.	This year's course on asthma will run on the LMS you buy next year.

SCORM Uses a Learning Objects Approach

- Discrete unit of digital instruction typically focused on a single learning objective
- Benefits
 - Access just the information/education you need
 - Reuse in multiple contexts (standalone or as part of a course) and systems
 - Eliminate single vendor dependence
 - Stop reinventing the wheel



Where does SCORM fit in?



Healthcare Customizations

Standard ways of encoding:

- Credit information
- Commercial support acknowledgement
- Provider and faculty relationships
- Off label drug use
- Level of evidence
- Target audience

<http://service.medbiq.org/lomform.html>

Healthcare Learning Object Metadata



Title:	<input type="text" value="Recognition and Management of Ricin Associated Illne"/>		
Description:	<input type="text" value="This course offers clinicians and public health officials"/>	Version:	<input type="text" value="1.0"/>
Keywords:	<input type="text" value="Ricin, Chemical Warfare"/> <input type="button" value="SNOMED Search"/>	Status:	<input type="text" value="final"/>
Objective:	<input type="text" value="Upon successful completion of the course, learners wi"/>	Publish Date:	<input type="text" value="30 Dec 2004"/> <input type="button" value="Calendar"/>
Author:	<input type="text" value="LCDR Joshua G. Schier, MD USPHS"/>	Expiry Date:	<input type="text" value="3 Jan 2006"/> <input type="button" value="Calendar"/>
Publisher:	<input type="text" value="Centers for Disease Control"/>	Credit Units:	<input type="text" value="1"/>
Reviewer:	<input type="text" value="John Doe, MD"/>	Credit Type:	<input type="text" value="CME"/>
Context:	<input type="text" value="post-graduate medical educat"/>	Provider Accreditation:	<input type="text" value="ACCME"/>
Competency:	<input type="text" value="patient care"/>	Activity Certification:	<input type="text" value="AMA PRA category 1"/>
<div>Off Label Drug Use: <input type="radio"/> Yes <input checked="" type="radio"/> No Description: <input type="text"/></div>		<div>Commercial Support: <input type="radio"/> Yes <input checked="" type="radio"/> No Description: <input type="text"/></div>	
<div>Provider Relationship: <input type="radio"/> Yes <input checked="" type="radio"/> No Description: <input type="text"/></div>		<div>Faculty Relationship: <input type="radio"/> Yes <input checked="" type="radio"/> No Description: <input type="text"/></div>	
Copyright: <input type="radio"/> Yes <input checked="" type="radio"/> No		Rights and Use Description: <input type="text" value="This content exists within the public"/>	
Cost: <input type="radio"/> Yes <input checked="" type="radio"/> No			
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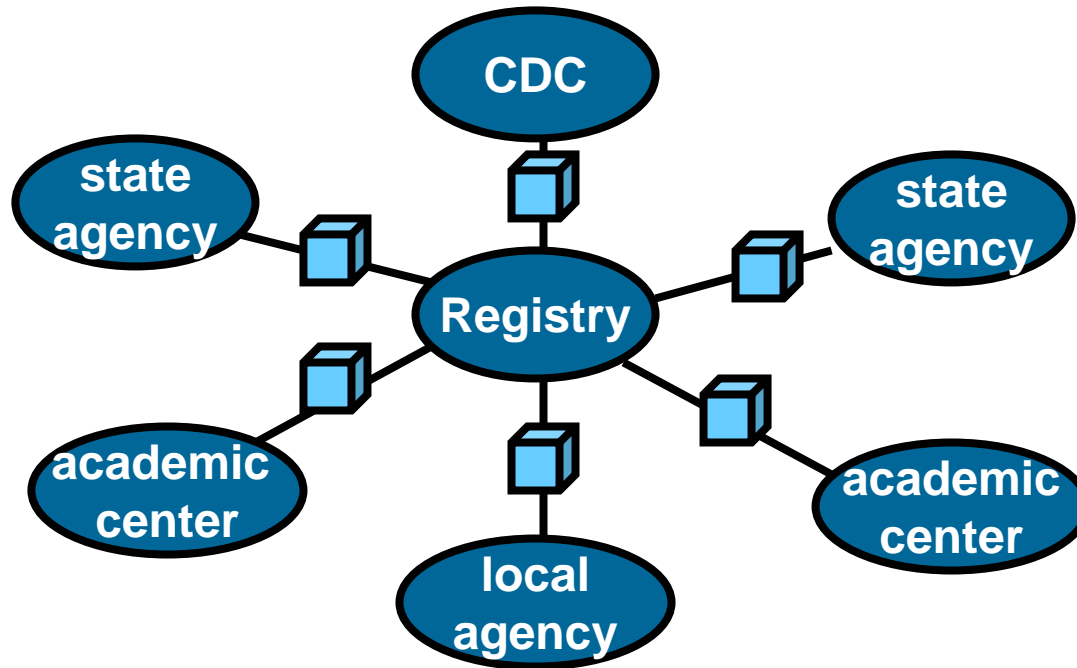
<http://service.medbiq.org/lomform.html>

Metadata Facilitates Search



- By topic
- By audience
- By competency
- Based on continuing education credit type
- Based on publisher
- Etc.

Benefits of SCORM for Healthcare



- Content can be shared broadly, implemented, and reused by other organizations
- SCOs can be assembled into content quickly
- Learners can find courses more quickly

Initial Steps for Implementing SCORM for Healthcare

- Learn more!
 - <http://meld.medbiq.org>
 - <http://www.lsal.cmu.edu/>
 - <http://www.adlnet.org>
- Start constructing e-learning in “chunks”
- Find out if your learning management system and authoring tools are SCORM conformant and will support metadata extensions
- Plan a pilot
- Allow for a learning curve

Participate in Standards Development

- MedBiquitous Standards Committee
 - Open to all materially affected parties
 - Votes on the standards
- MedBiquitous Working Groups
 - Open to MedBiquitous members
 - Drafts the standards

Questions?

- MedBiquitous Web site
<http://www.medbiq.org>
- MELD – MedBiquitous E-Learning Discourse
<http://meld.medbiq.org>

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